

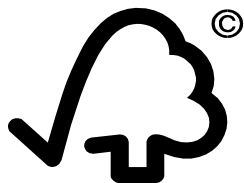
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*Practical conservation through certified forestry*

## Forest Management **2007 Annual audit** Report for:

Sino Forest Corporation  
in  
Gaoyao, Guangdong Province  
Peoples' Republic of China

Certificate Code:	SW-FM/CoC-1146
Audit Dates:	Jan. 21 - 24, 2007
Report Finalized:	09 August 2007
Auditors:	Walter Smith & Zeng Yanru, Ph.D.
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# 1. AUDIT PROCESS

## 1.1. Auditors and qualifications:

**Walter Smith, Lead Auditor, Senior Technical Specialist, Rainforest Alliance/ SmartWood:** Mr. Smith has 16 years experience in logging, training and forest resource management and 16 years experience in Forest Stewardship Council (FSC) forest management and chain of custody certification. He was a founding delegate to the FSC and on the original FSC International Principles and Criteria Working Group. Mr. Smith began working with SmartWood in 1995. Since then he has been a team leader on over 250 forest management and chain of custody assessments and audits in Canada, China, India, Indonesia, Japan, Malaysia, Nepal, Philippines, Singapore, South Korea, Vietnam and all regions of the United States. Additionally, Mr. Smith is a principal instructor for the Rainforest Alliance FSC Certification Assessor Training Program and has participated in 28 training workshops in North America and Asia. He also has ISO 14001 lead auditor training. Mr. Smith is the co-author of a book on certification with Chris Maser.

**Zeng Yanru, Ph.D., Consulting Auditor, Community & Environment Aspects**  
Dr. Zeng is a professor of Silviculture, School of Forestry & Biotechnology and Director, Research Center for Women and Natural Resources Management, Zhejiang Forestry University, China. She has a PhD in Genetics & Breeding of Forest Trees, MSc in Forestry & Bachelor's degree in Non-timber Forest Products. Dr. Zeng has been trained in forest management certification by WWF China, SGS-CSTC, State Forestry Administration of China, and the Chinese Academy of Forestry. She has participated in SmartWood practical and course-based FSC auditor training and has been a team member on FSC/SmartWood audits of Changhua Forest Farm, Sino-Forest, and APP China.

## 1.2. Audit schedule

Date	Location /main sites	Main activities
January 21, 2007	Guangdong	Auditors' travel
January 22	JFDC office	<ul style="list-style-type: none"> <li>Staff reported to the auditors about what had been done in the previous year against the audit results of the previous year</li> <li>Auditors interviewed the staff</li> <li>Auditors and JFDC Staff planned the audit schedule</li> </ul>
	JFDC nursery	Review seedling production and relevant trial
	Huilong Township	<ul style="list-style-type: none"> <li>Plantation review</li> <li>Group interview</li> </ul>
January 23	Baizhu Township	<ul style="list-style-type: none"> <li>Plantation review</li> <li>Group interview</li> </ul>
	Hedao Township (outside	<ul style="list-style-type: none"> <li>Review of harvesting sites</li> </ul>

	the certified area)	
January 24	Zhaoqing	<ul style="list-style-type: none"> <li>• Auditors discussed the audit results</li> <li>• Auditors feedback the audit results to JFDC staff</li> <li>• Auditors' travel</li> </ul>
Total number of person days used for the audit: <b>8</b> = number of auditors participating <b>2</b> times total number of days spent for the audit <b>4</b>		

### 1.3. Sampling methodology:

The primary objective of the SmartWood annual audit is to verify that Corrective Action Requests (CARs) required as a result of an assessment or subsequent audit of JFDC are being met and that their forest management practices continue to be in conformance with the FSC Principles and Criteria (P&C). JFDC has been FSC certified since 2004 and this is their third annual audit.

JFDC has two certified forest management units (FMU) in their Gaoyao operation: Huilong and Baizhu. Within these two FMUs the auditors selected sites that represented the spectrum of plantation management activities and social and environmental issues needed for a thorough evaluation of compliance with the FSC P&C as well as compliance with the corrective action requests of the certification. Audit sites were generally pre-selected, however, several sites were randomly chosen for review while traveling through the FMU's.

After the auditors received an oral report from the JFDC staff about meeting the requirements of the 2006 CARs, the auditors developed a schedule of what sites they wanted to review and who would be interviewed. In addition, the auditors got both electronic and hard copies of the following documents from JFDC:

- 2006 Annual Progress Report on FSC-Certified Plantation Management of Jiayao Forestry Development Company, Limited
- Monitoring Report on Biodiversity and Potential Habitats Associated with Commercial Plantation Ecosystems in Gaoyao, Guangdong First draft
- Appendix 6: Harvesting site management for FSC/FM certified plantation
- Appendix 7: Road construction and maintenance standard
- Appendix 8: Road construction and maintenance requirements
- Appendix 9: JDFC's forest plantation management plan
- Appendix 10: Waste management technical guidelines
- Appendix 11: Water bodies and valleys within the plantations of JFDC, and

The SmartWood Asia Pacific regional office provided the auditors with:

- JFDC 2006 Forest management annual audit report

FMU or Site audited	Rationale for selection	Group FMU belongs to and number of FMUs in the group
JDFC office	To interview JFDC staff for what had been done in the previous year	There are two forest management units

		(FMU)
Nursery	To review seedling production and research work	Huilong Township
Sanduo Natural Village, Guangrong Administrative Village,	<ul style="list-style-type: none"> <li>To review regenerated plantation by coppicing in 2000</li> <li>To review drainage ditch and soil erosion-prevention measures</li> <li>Stakeholder interview</li> </ul>	Huilong Township
Chenghu Administrative Village,	<ul style="list-style-type: none"> <li>To review a water level-monitoring point</li> <li>Stakeholder interview</li> <li>To review a mixed plantation</li> <li>Group interview</li> </ul>	Huilong Township
Tielu Natural Village, Gaoshan Administrative Village,	<ul style="list-style-type: none"> <li>To review regenerated plantation</li> <li>Plantation in trial for different species</li> <li>Group interview</li> </ul>	Baizhu Township
Xiapo Natural Village, Xiapo Administrative Village,	<ul style="list-style-type: none"> <li>Observation plot (Eucalyptus) for biodiversity</li> <li>Observation plot (Masson pine) for biodiversity</li> <li>Stakeholder interview</li> </ul>	Baizhu Township
Baizhu Town	<ul style="list-style-type: none"> <li>Interview township government staff</li> </ul>	Baizhu Township
Baisha Natural Village, Baisha Administrative Village,	<ul style="list-style-type: none"> <li>A plantation in trial of clones, density and rotation length</li> <li>To review a sensitive area (valley)</li> </ul>	Baizhu Township
Yunmei Village, Hedao Town, Gaoyao	<ul style="list-style-type: none"> <li>To review a harvesting site</li> </ul>	Outside the certified area.

#### 1.4. Stakeholder consultation process

Stakeholder type (NGO, government, local inhabitant etc.)	Number of stakeholders informed	Number of stakeholders consulted or providing input
Local inhabitant	11	11
JFDC staff	10	10
Local government staff	6	6
Harvesting workers	2	2

### 1.5. Changes to Standards (if applicable)

No changes to the standard have occurred since the last evaluation. For the conduction of this audit as well as for the conduction of previous audit/assessment the following standard was used: the SmartWood Interim Forest Management Standard for China October 2003.

## 2. AUDIT FINDINGS AND RESULTS

### 2.1. Changes in the forest management of the FMO

JFDC staff has made efforts to improve their work to meet the requirements of the CARs stated in the 2006 audit report for. Detail of the improvements are discussed in from section 2.3 to 2.5 below.

Qianghua He, Deputy General Manager has taken over the daily management duties of JFDC from Lu Qiding who is retiring.

### 2.2. Stakeholder issues

During the audit, the following stakeholders were selected and interview:

- JFDC staff: including deputy general manager, manager and deputy managers of engineering department, R & D director, forest management information system manager, environmental manager, full-time forest ranger, staff of engineering department and manager of business engineering department
- Local villagers: including village director, party secretary, villagers, accountant, cashier, and a forest ranger
- Baizhu Township government staff: including a deputy head of a township, director of the township-owned forestry station, director of the township's agricultural office, director of the township's civil affairs office, director of the township's environmental protection station, and director of the township's labor station

The general response to the JFDC's forest management is good. There are no disputes between the villagers, workers, neighbors or farmers and the company. Moreover, SmartWood received no complaints or comments from stakeholders concerning JFDC's forest management practices over the past year.

### 2.3. Compliance with applicable corrective actions

The section below describes the activities of the certificate holder to address each applicable corrective action issued during previous evaluations. For each CAR a finding is presented along with a description of its current status using the following categories. Failure to meet CARs will result in noncompliances being upgraded from minor to major noncompliances with compliance required within 3 months or face suspension or termination of the SmartWood certificate. The following classification is used to indicate the status of the CAR:

CAR Status Categories	Explanation
Closed	Certified operation has successfully met the CAR and addressed the underlying noncompliance.

<b>Open</b>	Certified operation has <u>not met</u> the CAR; underlying noncompliance is still present. CAR becomes a Major CAR with a 3 month deadline for compliance
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<b>CAR #:</b> 4/05	<b>Reference Standard #:</b> Criterion 6.2
<b>Non-compliance:</b> Major <input checked="" type="checkbox"/> Minor <input type="checkbox"/>	An on-site scientific analysis of wildlife and RTE species in the area is lacking. CAR 4/05 was not met prior to the 2006 audit.
<b>Corrective Action Request:</b> A professional biologist must conduct on-site research to determine what terrestrial and aquatic plants and wildlife actually inhabit the plantation area and whether RTE species and/or their habitat exist within the plantation area. The research must include habitat requirements and protection measures for maintaining all species discovered.	
<b>Timeline for Compliance:</b> Six months upon receiving the final 2006 audit report	

**Audit findings:** JDFC has invited professionals from School of Forestry, South China Agricultural University to conduct a field investigation of vegetation species, insects and birds that inhabit the plantation. There are 32 sampling plots. For different species, the sampling plot size is different: Tree species, the size is 15 m x 15 m,; shrubs 4 m x 4 m x 2; herbs 1 m x 1 m x 4, for insects 5 m x 6 m, and for birds 20 m x 50 m or 100 m x 10 m (totally 1000 m<sup>2</sup>). The sampling plots were designed by two professors of the University who are experts in plant taxonomy (Prof. Feng Zhijian) and entomology (Associated Prof. Li Yizhen). A graduate student studying plantation ecosystem at the university, a JFDC technician and a forest ranger formed a group responsible for setting up the sampling plots. About half-day was needed for the investigation of each plot. The graduate student, Wei, was in charge of data collection, which will be included in his thesis. He was also assisted in the identification of plant species by another student working in plant taxonomy (Xu Jianxin).

It has been found that there are 55 vegetation species in the Eucalyptus plantations, which is more than those in the plantation of pine and the forest for the public benefit nearby, although the difference between pine and Eucalyptus plantations is not significant. Insect species belonging to 19 families or genera have been found, which is more in the Eucalyptus plantation than in the Acacia plantation, however it is not statistically significance. It is also found that 3-or 4-year-old Eucalyptus plantation has the most biodiversity.

Terrestrial animals are seldom seen in the plantations. Sometimes snakes and other reptiles are seen. So far no RTE species (stated in the national or provincial standards) have been seen from the plantation, but they are available from the nature reserve nearby. A comparison has been made between pine plantation and Eucalyptus plantation and it is found that totally there are 75 species, 55 of which is found in the Eucalyptus plantation, 49 in the pine plantation, and many overlap. There is some difference in the number of species among different sampling plots.

In 2007, more sampling plots will be added by JFDC. In addition, forest rangers are required to report protected species they see in the plantation once a week. They have a daily working record and pictures of relevant animals and plants are available at the local forestry station.

There is no difference between the plantations and the ecological forest in species. Therefore

the plantation management provides, at this point, the habitat needs for the species that currently exist in the area. The monitoring of the plots will continue for a number of years and will provide the opportunity for JFDC to keep track of species diversity and maintenance.

**Status:** Closed

**Follow-up Action:** Obs 2/07

**CAR #:** 7/05

**Reference Standard #:** Criterion 10.2

**Non-compliance:**

Major  Minor

Clearcuts are large and there is no explicit adjacency requirement, which may impact wildlife. CAR 7/05 was not met prior to the 2006 audit.

**Corrective Action Request:**

Prepare a justification, based on relevant monitoring and biologist recommendations concerning species habitat maintenance (see CAR 4/05), for the size of the clearcuts described in the management plan and timing of the harvesting of adjacent units.

**Timeline for Compliance:** Within six months upon receiving the final 2006 audit report

**Audit findings:** See the description for CAR 4/05. Monitoring has not been finished and more sampling plots will be added in 2007. It is still early to describe species habitat.

For the size of clear cuts, there is no objection from the local forestry bureau when an application for the harvesting quota is submitted. Sometimes the size of a sub-compartment belonging to the same community is larger than the size of a clear cut allowed and the local community doesn't agree to harvest part of the sub-compartment as a measure to prevent the formation of an even-aged forest. In this case, JFDC usually finishes harvesting during a period of time longer than 3 months. When a part of Eucalyptus plantation regenerates for 3 months or longer, trees will grow to a height of 2-3 meters creating sufficient canopy closure to avoid soil erosion. If a sub-compartment takes 9 months to harvest, for example, the trees in two-thirds of the harvest area will already be over 2-3 meters in height. In addition, harvesting is avoided in the wet season and both harvesting and transportation are operated manually (not by machines) to prevent soil erosion.

**Status:** Closed

**Follow-up Action:** None

**CAR #:** 1/06

**Reference Standard #:** Criterion 6.5

**Non-compliance:**

Major  Minor

Soil erosion control measures for roads and paths are not appropriately implemented and did not provide consistently effective control of erosion and rutting.

**Corrective Action Request:**

JFDC shall implement appropriate and effectively designed road and path erosion control measures.

**Timeline for Compliance:** By the next annual audit

**Audit findings:** JFDC has had a manual for road construction and maintenance since 2005. The auditors observed that the road damaged during the harvesting and log transportation has been repaired and cement drainage pipes have been used on the road system to prevent soil erosion.

**Status:** Closed

**Follow-up Action:** None

<b>CAR #:</b> 2/06	<b>Reference Standard #:</b> Criterion 6.2, 6.3, 9.1, 10.5
<b>Non-compliance:</b> Major <input type="checkbox"/> Minor <input checked="" type="checkbox"/>	JFDC plantations may contain unique areas of remnant ecosystems/habitats. These unique ecosystems are not surveyed, documented and designated for protection or restoration.
<b>Corrective Action Request:</b> JFDC shall survey, document, map and develop and implement restoration and protection measures for unique or remnant ecosystems or habitats.	
<b>Timeline for Compliance:</b> By the next annual audit	

<b>Audit findings:</b> JFDC during their development of monitoring sites described in the findings of CAR 4/05 above has surveyed, documented and mapped remnant ecosystems and habitats on the plantation. A sample of remnant ecosystems and habitats that were documented and mapped was viewed by the auditors during the field site inspections. However, restoration or protection measures for these areas are not fully developed. Therefore the CAR must remain open and be elevated to a major CAR.	
<b>Status:</b> Open	
<b>Follow-up Action:</b> Major CAR 2/06 must be completed within three months of the receipt of the final report.	

#### 2.4. New corrective actions issued as a result of this audit

<b>CAR #:</b> 2/06	<b>Reference Standard #:</b> Criterion 6.2, 6.3, 9.1, 10.5
<b>Non-compliance:</b> Major <input checked="" type="checkbox"/> Minor <input type="checkbox"/>	JFDC plantations may contain unique areas of remnant ecosystems/habitats. These unique ecosystems are not surveyed, documented and designated for protection or restoration. Although JFDC has surveyed, documented and mapped these areas they have not developed restoration and protection measures to assure their long-term viability.
<b>Corrective Action Request:</b> JFDC shall survey, document, map and develop and implement restoration and protection measures for unique or remnant ecosystems or habitats.	
<b>Timeline for Compliance:</b> Within three months of JFDC receiving the final report	

<b>CAR #:</b> 01/07	<b>Reference Standard #:</b> CoC 9
<b>Non-compliance:</b> Major <input type="checkbox"/> Minor <input checked="" type="checkbox"/>	It does not appear that JFDC obtained approval from SmartWood for the public statements about their FSC certification on the Sino-Forest website.
<b>Corrective Action Request:</b> Sino-Forest/JFDC shall obtain approval from SmartWood for the promotional description of their FSC certification that appears on their website.	
<b>Timeline for Compliance:</b> By the next annual audit	

#### 2.5. Audit observations

Observations are very minor problems or the early stages of a problem that does not of itself constitute non-compliance, but which the auditor considers may lead to a future non-compliance if not addressed by the client.

Observation	Reference Std #
OBS 01/07: JFDC has offered training to its staff on pesticides and chemicals so	6.6

that staff know what pesticides and chemicals to be used. However, JFDC should be aware that there are new chemicals on the FSC highly hazardous chemical list.	
OBS 02/07: JFDC should consider keeping the monitoring and measuring the sample plots throughout at least one management planning period.	8.1, 6.2
OBS 03/07: JFDC should add to its procedures the use of the certification code on transportation and sales documents when they begin selling logs as FSC certified from the certified areas.	CoC 5
OBS 04/07: JFDC should add to its procedures that the use of the FSC/SW trademarks, as well as public information related to certification is submitted to SmartWood for review and approval.	CoC 9
OBS 05/07: JFDC should up-date the CoC management system (SFFMW-COC-001) in both the English and Chinese version to be consistent in both languages.	CoC 2

## 2.6. Audit decision

Based on a thorough field review and analysis of Sino-Forest Corporation/ Jiayao Forest Development Company, Ltd. forest management system and practices in comparison with the FSC standard, the SmartWood auditors found one new minor non-conformance and one major non-conformance during the 2007 audit. The major corrective action request (CAR) was given because a minor CAR from 2006 was not completely met by Company. Although a major CAR was given, the auditors recommend that Sino-Forest Corporation / Jiayao Forest Development Company, Ltd. retain their FSC certificate during the interval between the receipt of this draft of the audit report and the time given to close the major CAR.